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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OCT 16 1990

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OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Chlorpyrifos - Dursban TC label amendment

Identifying No. 62719-47  
Caswell No. 219AA  
HED Project No. 0-0630

FROM: Elizabeth A. Doyle, Ph.D. *E. A. Doyle 9/25/90*  
Review Section I, Tox Branch II (HFAS) (H7509C)

TO: Dennis Edwards, PM21  
Registration Division (H7505C)

THRU: Yiannakis M. Ioannou, Ph.D., Section Head *J. M. Ioannou 9/25/90*  
Review Section I, Tox Branch II (HFAS) (H7509C)

and

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Tox Branch II (HFAS) *M. van Gemert 10/1/90*  
Registration Division (H7505C)

Registrant: Dow Chemical, USA

Background: The registrant has petitioned to amend the label for Dursban TX. Tox Branch II has been asked to comment on the portion of the label "Rate Determination Guidelines" in which a proposed 2% concentration of emulsion is indicated for use in cases described by the following language:

"In areas characterized by high chemical stress or infestation by aggressive species in the genus Conto-  
termes, the applicator may desire an extended residual life beyond that provided by the 1% dilution.

"In such cases, up to a 2.0% dilution may be used in critical areas within the structure that are highly susceptible to termite attack and reinfestation (e.g. bath traps, utility entry points, etc.), or in locations characterized by extreme environmental conditions which might cause reduced residual termite control. Such areas may exist in (but are not limited to) Arizona, Florida, Louisiana, Hawaii, etc."

NDEB has reviewed the proposed label changes (cf. memo D. Jaquith to D. Edwards, Jan 12, 1990, HED Project No. 9-2073). In this review, D. Jaquith indicated that "NDEB has no data available correlating underground application rate with air concentrations of termiticides" and therefore, based upon the current database available, no valid exposure assessment can be made (personal communication, D. Jaquith).

Conclusions: Tox Branch II has a number of outstanding concerns which the company should address in pursuing the label change indicating for the use of a 2% Dursban TC emulsion in underground termite treatments.

- 1) No adequate estimate of exposure and resulting health effects can be made in the absence of monitoring data from test structures. These data are desired because the exposure to chlorpyrifos by this use pattern may persist for several days depending on the structural configuration of the dwelling (see attachment #1, HED Project No. 9-2073). The registrant should provide data indicating the difference in exposure to household residents with application of a 1% emulsion compared to a 2% emulsion.
- 2) The registrant does not adequately define "areas of high chemical stress". This terminology should be better defined to provide guidance to potential consumers as to when each of the three application rates (0.5%, 1.0% and 2.0%) are appropriate.
- 3) The registrant should consider the integration of soil dissipation data with the monitoring data in item 1 above to document that exposures in "areas of high chemical stress" will actually be less than doubled due to more rapid dissipation rates in soils.

The registrant may wish to consult with NDEB and EFED in developing protocols to address these questions.